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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,191	12/21/2000	Toshiyuki Hasegawa	0666.1640000	7023

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EXAMINER

LUM VANNUCCI, LEE SIN YEE

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,191

Applicant(s)

HASEGAWA, TOSHIYUKI

Examiner

Ms. Lee S. Lum

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-23 and 25-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. An Amendment was filed 3/12/04 in which Claims 12 and 24 were also cancelled.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 11-18, 23-27 32-37 and 45-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Wernicke 6085853.

Re **Claims 1-5 and 32-37**, Wernicke discloses
prime mover 5,
each of three or more transaxle devices 8/9/10/14/17/18/20, each including input and output means (fig 1, all inherent),
wherein one device is main transaxle device 8 whose input means 6 receives power from the prime mover prior to the other devices (fig 1),
first 12 and second 11 transmission members,
wherein the power from the main transaxle device is delivered to the first member, and,
wherein the second member sync. interlocks with both first member, and input means 12 of at least one of the other devices other than the main transaxle device, and, further including
one-way clutch/power divider 42 interposed between the two members,
only the steering axle 14 sync. interlocks with second member 11, and,
the steering axle is other than the main transaxle device so that the input means of the former sync. interlocks with the second member.

Art Unit: 3611

Re **Claims 6 and 38**, the reference further discloses in fig 2,
three axles total,
wherein axles other than the steering transaxle sync. interlock with first member 12.

Re **Claims 11-14, 16, 17 and 23-26**, the reference further discloses a multi-wheel
vehicle in figs 1 and 3 comprising
three or more axles 1-4, where one is frontmost steering axle 14,
differential gear unit 8 including
 input shaft 6 (and unidentified gear, inherent in a differential),
 output gear (unidentified, inherent in a differential),
 output shafts 11/12 with "side" gears (unidentified, inherent gears in a
differential),
 the gear unit differentially sharing power transmitted into the input between the
outputs,
 wherein the input and outputs synchronously interlock with the axles, and,
 only the steering axle sync. interlocks with one of the outputs - 11.

Re **Claims 45-47**, the reference further discloses
the input and outputs sync. interlocks with either the axle of the main transaxle device, or
the input means of one of the other devices.

Re **Claims 15, 18, 27 and 48-51**, the reference further discloses the recited elements.

Art Unit: 3611

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. **Claims 7-10, 19-22, 28-31 and 54-57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Stieg 4462271.

Re **Claims 7-10, 19, 20, 22, 28-31, 41-44 and 54-57**, Wernicke does not disclose brakes, while Stieg discloses

brake halves 52/54 (hydraulic ("wet") - Col 3, lines 24-25), pedal (inherent), and, differential means 100 for locking the output shafts together (Col 5, second full paragraph).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include brakes so that the vehicle may be stopped, as shown in Stieg. Also, it would have been obvious to use hydraulic brakes, as this type is in wide use, and as is very well-known in the art.

Re **Claims 21 and 30**, the previous patents do not explicitly disclose that the nonsteerable axle includes a brake, but it is well-known that either a steerable or nonsteerable axle can have a brake.

B. **Claims 39 and 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Kaspar 5848664.

Wernick does not disclose a continuously-variable transmission, while Kaspar shows this element 35. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this element, as shown in Kaspar, in order to increase the efficiency of drive power to the wheels according to the load conditions.

Art Unit: 3611

C. **Claims 40 and 53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Kaspar, and in further view of Krettenauer et al 4639008.

The previous references do not disclose a power take-off (PTO) unit, while Krettenauer shows this element 8. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include PTO, as shown in Krettenauer, to increase torque capabilities of the drive system, thus increase drive power under different load conditions.

D. **Claims 58 and 59** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wernick in view of Wohlfarth 4823897.

Wernicke does not disclose first and second drivetrains, each on a lateral side of the vehicle, while Wohlfarth shows this configuration. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this arrangement, as shown in Wohlfarth, to provide easier access to the separate units for repair/maintenance.


5. RESPONSE TO REMARKS

Upon reconsideration, Examiner maintains, and expands, her rejections using Wernicke in combination with Stieg, etc. She apologizes for any inconvenience.

6. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, M-F, 8-5. Our fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer assistance at (703) 306-5771.

Ms. Lee S. Lum
Examiner
5/25/04



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